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H.C. PARK & ASSOCIATES, PLC 8500 LEESBURG PIKE SUITE 7500 VIENNA, VA 22182				EXAMINER		
				OWYANG, MICHELLE N		
		ART UNIT	PAPER NUMBER			
		2168				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATENT@PARK-LAW.COM

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,476	<b>Applicant(s)</b> KIM ET AL.
	<b>Examiner</b> MICHELLE Owyang	<b>Art Unit</b> 2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 28 August 2009.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 21-24, 30-33 and 35-37 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 21-24, 30-34, 35-37 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

The Action is responsive to Applicant's Request for Continued Examination (RCE) filed on 8/28/2009, with amended claims 21, 30, 35, and cancelled claims 1-20, 25-29, 34, 38.

Claims 21-24, 30-33, 35-37 are pending in this application.

### ***Claim Rejections - 35 USC § 112***

2. In view of the claimed amendments filed on 7/22/2009 and 8/28/2009, the rejections made under 35 USC 112, first paragraph and second paragraph, as set forth in the previous office action are hereby withdrawn.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 21-24, 30-33, 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandrasekar et al. (Patent No. US 6,978,264 B2), hereinafter Chandrasekar in view of Yoo et al (Patent No. 7,146,416 B1), hereinafter Yoo.

Yoo is cited by the Examiner in the previous office actions.

With respect to claim 21, Chandrasekar discloses a search service system (*Col. 3, lines 11-14: system for performing a search*) comprising:

*at least one memory having program instructions and databases (Fig 1 & 11: computer network environment with memory and storages that store information), the databases including: a category classification database including at least one representative category associated with one or more predetermined keyword groups (Col. 3, lines 31-35, Col. 8, lines 13-15 & 61-62: hierarchical of categories and groups of key phrases are associated with the categories, key phrases corresponds to the keywords), each of the predetermined keyword groups including one or more representative keywords and other keywords associated with the respective*

representative keywords (*Col. 7, lines 50-59, Col. 8, lines 56-60, Col. 9, lines 4-8: core key phrase and key phrases are associated with each group, and they are interpreted as the representative keyword and other keyword*),

a keyword database including at least one predetermined keyword group and data indicative of a number of searches made using one or more representative keywords or other keywords associated with the respective representative keywords (*Col. 12, lines 46-48, Col. 13, lines 5-10: query log includes key phrases and information on the number the key phrases are entered, query log is interpreted as related to the keyword database and the key phrases are associated with the keyword group*), each of the representative keywords representing the other keywords associated with the representative keyword, which convey a same or similar meaning (*Col. 9, lines 42-54: key phrases are associated with other key phrases with the same or similar meaning*);

means for receiving a selection of a representative category associated with a predetermined keyword group from a manager wherein the selection is made to reflect current societal interest by the manager (*Col. 3, lines 62-67: select popular category based on the average number of times a particular search term associated with the concept has entered; it is interpreted that the popularity is associated with current social interest*);

means for associating a representative keyword included in a first keyword group associated with a first representative category, with a second keyword group associated with a second representative category based on the selection of the manager (*Col. 3, lines 45-55: hierarchical data structure composed of concepts and key phrases are related to the concepts*;

*thus it is interpreted that the representative keyword is associated with the first keyword group and second keyword group);*

means for receiving a search request from a user terminal through a communication network, the search request including a search keyword (*Col. 15, line 60: user search query is entered*);

a first search unit for searching the category classification database for a representative category associated with the first keyword group including the search keyword (*Col. 3, lines 50-54, Col. 16, lines 4-8: search the concept from the hierarchical data structure, the concept is associated with the query and the category*), the first search unit determining the second keyword group related to the first keyword group by referring to the category classification database, wherein the second keyword group including the first keyword group (*Col. 3, lines 30-40, Col. 7, lines 45-60, Fig 2: linking the child nodes with the parent node, the node is associated with the concept; thus the parent node is interpreted as related to the second group*);

a second search unit for searching the keyword database for the second keyword group and data indicative of a number of searches made using one or more representative keywords or other keywords included in the second keyword group (*Col. 12, lines 41-55, Col. 13, lines 66-67, Col. 15, lines 34-36: import the query logs in a database for determine the popularity of a key phrase, and match the query with the key phrases; the query log includes information on the number of query was entered*).

Concerning “an input order computing unit for computing input order of keywords included in the first keyword group by using the second keyword group”, Chandrasekar discloses

computing input order of keywords (*Col. 13, lines 28-45: calculate popularity of the key phrases entered, it is interpreted that popularity is associated with ordering*).

Chandrasekar does not explicitly discloses an input order computing unit for computing input order of keywords included in the first keyword group by using the second keyword group.

However, Yoo discloses an input order computing unit for computing input order of keywords in multiple groups and categories (*Col. 11, lines 24-39, Col. 12, lines 11-14, Fig 10-12A: determine the buzz values for the search terms, and the buzz value is associated with number of search request entered; thus it is interpreted as related to keyword input ordering*).

Since Chandrasekar and Yoo are directed to tracking user activities in order to provide relevant search results to users, it would have been obvious to one skilled in the art at the time of the invention to modify and combine the teachings of Yoo with the system of Chandrasekar by incorporating popular search terms determination and management techniques in order to provide more sophisticated and informative regarding popular trends (*Yoo, Col. 4, lines 20-24*).

The combined teaching of Chandrasekar and Yoo further discloses means for providing the user terminal with information showing popularity of keywords together with keyword search results so that a display of the user terminal displays the information showing popularity together with the keyword search results, the information showing popularity being related to the search request based, at least in part, upon the data indicative of the respective number of searches made using the respective representative keywords or other keywords included in the second keyword group user (*see Chandrasekar, Col. 3, lines 62-63, Fig 8A: provide ranking of the categories and subcategories to the user by displaying the category in decreasing order of popularity; and see Yoo, Col. 14, lines 6-9 & 45-51, Fig 9-14, provide buzz value reports and the*

*buzz values are associated with popularity of the search terms based on the number of search searched have entered across all categories and for different individual categories);*

means for updating the data indicative of a number of searches made using a representative keyword corresponding to the search keyword or other keywords of the second keyword group in response to the search request from the user terminal (see *Chandrasekar, Col. 12, lines 62-67: update the query count information and remove outdated key phrases periodically; and see Yoo, Col. 4, lines 29-38, Col. 47-51: tracking buzz values and determine changes in area of user interest associated with topic, term, or category*).

With respect to claim 30, Chandrasekar a search service method (*Col. 3, lines 11-14: method for performing a search*) comprising the steps of:

maintaining at least one representative category associated with one or more predetermined keyword groups in a category classification database (*Col. 3, lines 31-35, Col. 8, lines 13-15 & 61-62: hierarchical of categories and groups of key phrases are associated with the categories, key phrases corresponds to the keywords*), each of the predetermined keyword groups including one or more representative keywords and other keywords associated with the respective representative keywords (*Col. 7, lines 50-59, Col. 8, lines 56-60, Col. 9, lines 4-8: core key phrase and key phrases are associated with each group, and they are interpreted as the representative keyword and other keyword*);

upon receipt of instructions from a manager, associating a representative keyword included in a first keyword group associated with a first representative category, with a second keyword group associated with a second representative category to reflect current societal

interest (*Col. 3, lines 45-67: hierarchical data structure composed of concepts and key phrases are related to the concepts/category, and select popular category based on the average number of times a particular search term associated with the concept has entered; thus it is interpreted that the representative keyword is associated with the first keyword group and second keyword group, and popularity is associated with current social interest*);

maintaining at least one predetermined keyword group and data indicative of a number of searches made using one or more representative keyword or other keywords associated with the respective representative keywords, in a keyword database (*Col. 12, lines 46-48, Col. 13, lines 5-10: query log includes key phrases and information on the number the key phrases are entered, query log is interpreted as related to the keyword database and the key phrases are associated with the keyword group*), each of the representative keywords representing the other keywords associated with the respective representative keyword, which convey a same or similar meaning (*Col. 9, lines 42-54: key phrases are associated with other key phrases with the same or similar meaning*);

receiving a search request from a user terminal through a communication network, the search request including a search keyword (*Col. 15, line 60: user search query is entered*);

searching the category classification database for a representative category associated with a keyword group including the search keyword (*Col. 3, lines 50-54, Col. 16, lines 4-8: search the concept from the hierarchical data structure, the concept is associated with the query and the category*);

searching the keyword database for a keyword group associated with the searched representative category and data indicative of a number of searches made using one or more

representative keywords or other keywords associated with the respective representative keywords included in the searched keyword group (*Col. 12, lines 41-55, Col. 13, lines 66-67, Col. 15, lines 34-36: import the query logs in a database for determine the popularity of a key phrase, and match the query with the key phrases; the query log includes information on the number of query was entered*).

Concerning “providing the user terminal with information showing popularity of keywords together with keyword search results so that a display of the user terminal displays the information showing popularity together with the keyword search results, the information showing popularity being related to the search request based, at least in part, upon the data indicative of the respective number of searches made using the respective representative keywords or other keywords associated with the respective representative keywords included in the searched keyword group”,

Chandrasekar discloses providing a display of the user terminal displays the information showing popularity together with the keyword search results, the information showing popularity being related to the search request based, at least in part, upon the data indicative of the respective number of searches made using the respective representative keywords or other keywords associated with the respective representative keywords included in the searched keyword group (*Col. 3, lines 62-63, Fig 8A: provide ranking of the categories and subcategories to the user by displaying the category in decreasing order of popularity, and popularity is based on data indicative number of searches made using the key phrases*).

Chandrasekar does not explicitly disclose providing a display of the user terminal displays the information showing popularity together with the keyword search results, the

information showing popularity being related to the search request based, at least in part, upon the data indicative of the respective number of searches made using the respective representative keywords or other keywords associated with the respective representative keywords included in the searched keyword group.

However, Yoo discloses providing a display of the user terminal displays the information showing popularity together with the keyword search results, the information showing popularity being related to the search request based, at least in part, upon the data indicative of the respective number of searches made using the respective representative keywords or other keywords associated with the respective representative keywords included in the searched keyword group (*Col. 14, lines 6-9 & 45-51, Fig 9-14, provide buzz value reports and the buzz values are associated with popularity of the search terms based on the number of search searched have entered across all categories and for different individual categories*).

Since Chandrasekar and Yoo are directed to tracking user activities in order to provide relevant search results to users, it would have been obvious to one skilled in the art at the time of the invention to modify and combine the teachings of Yoo with the method of Chandrasekar by incorporating popular search terms determination and management techniques in order to provide more sophisticated and informative regarding popular trends (*Yoo, Col. 4, lines 20-24*).

The combined teaching of Chandrasekar and Yoo further discloses updating the data indicative of the number of searches made using a representative keyword corresponding to the search keyword or other keywords associated with the representative keyword in response to the search request from the user (*see Chandrasekar, Col. 12, lines 62-67: update the query count information and remove outdated key phrases periodically; and see Yoo, Col. 4, lines 29-38, Col.*

*47-51: tracking buzz values and determine changes in area of user interest associated with topic, term, or category).*

With respect to claim 35, Chandrasekar discloses one or more storage media having stored thereon a computer program that, when executed by one or more processors, causes the one or more processors to perform acts (*Col. 3, lines 11-14, Fig 1& 11: method for performing a search, and the system includes storage media*) including:

maintaining at least one representative category associated with one or more predetermined keyword groups in a category classification database (*Col. 3, lines 31-35, Col. 8, lines 13-15 & 61-62: hierarchical of categories and groups of key phrases are associated with the categories, key phrases corresponds to the keywords*), each of the predetermined keyword groups including one or more representative keywords and other keywords associated with the respective representative keywords (*Col. 7, lines 50-59, Col. 8, lines 56-60, Col. 9, lines 4-8: core key phrase and key phrases are associated with each group, and they are interpreted as the representative keyword and other keyword*);

upon receipt of instructions from a manager, associating a representative keyword included in a first keyword group associated with a first representative category, with a second keyword group associated with a second representative category to reflect current societal interest (*Col. 3, lines 45-67: hierarchical data structure composed of concepts and key phrases are related to the concepts/category, and select popular category based on the average number of times a particular search term associated with the concept has entered; thus it is interpreted*

*that the representative keyword is associated with the first keyword group and second keyword group, and popularity is associated with current social interest);*

maintaining at least one predetermined keyword group and data indicative of a number of searches made using one or more representative keyword or other keywords associated with the respective representative keywords, in a keyword database (*Col. 12, lines 46-48, Col. 13, lines 5-10: query log includes key phrases and information on the number the key phrases are entered, query log is interpreted as related to the keyword database and the key phrases are associated with the keyword group*), each of the representative keywords representing the other keywords associated with the respective representative keyword, which convey a same or similar meaning (*Col. 9, lines 42-54: key phrases are associated with other key phrases with the same or similar meaning*);

receiving a search request from a user terminal through a communication network, the search request including a search keyword (*Col. 15, line 60: user search query is entered*);

searching the category classification database for a representative category associated with a keyword group including the search keyword (*Col. 3, lines 50-54, Col. 16, lines 4-8: search the concept from the hierarchical data structure, the concept is associated with the query and the category*);

searching the keyword database for a keyword group associated with the searched representative category and data indicative of a number of searches made using one or more representative keywords or other keywords associated with the respective representative keywords included in the searched keyword group (*Col. 12, lines 41-55, Col. 13, lines 66-67, Col. 15, lines 34-36: import the query logs in a database for determine the popularity of a key*

*phrase, and match the query with the key phrases; the query log includes information on the number of query was entered).*

Concerning "providing the user terminal with information showing popularity of keywords together with keyword search results so that a display of the user terminal displays the information showing popularity together with the keyword search results, the information showing popularity being related to the search request based, at least in part, upon the data indicative of the respective number of searches made using the respective representative keywords or other keywords associated with the respective representative keywords included in the searched keyword group",

Chandrasekar discloses providing a display of the user terminal displays the information showing popularity together with the keyword search results, the information showing popularity being related to the search request based, at least in part, upon the data indicative of the respective number of searches made using the respective representative keywords or other keywords associated with the respective representative keywords included in the searched keyword group (*Col. 3, lines 62-63, Fig 8A: provide ranking of the categories and subcategories to the user by displaying the category in decreasing order of popularity, and popularity is based on data indicative number of searches made using the key phrases*).

Chandrasekar does not explicitly disclose providing a display of the user terminal displays the information showing popularity together with the keyword search results, the information showing popularity being related to the search request based, at least in part, upon the data indicative of the respective number of searches made using the respective representative

keywords or other keywords associated with the respective representative keywords included in the searched keyword group.

However, Yoo discloses providing a display of the user terminal displays the information showing popularity together with the keyword search results, the information showing popularity being related to the search request based, at least in part, upon the data indicative of the respective number of searches made using the respective representative keywords or other keywords associated with the respective representative keywords included in the searched keyword group (*Col. 14, lines 6-9 & 45-51, Fig 9-14, provide buzz value reports and the buzz values are associated with popularity of the search terms based on the number of search searched have entered across all categories and for different individual categories*).

Since Chandrasekar and Yoo are directed to tracking user activities in order to provide relevant search results to users, it would have been obvious to one skilled in the art at the time of the invention to modify and combine the teachings of Yoo with the storage media with computer program of Chandrasekar by incorporating popular search terms determination and management techniques in order to provide more sophisticated and informative regarding popular trends (*Yoo, Col. 4, lines 20-24*).

The combined teaching of Chandrasekar and Yoo further discloses updating the data indicative of the number of searches made using a representative keyword corresponding to the search keyword or other keywords associated with the representative keyword in response to the search request from the user (*see Chandrasekar, Col. 12, lines 62-67: update the query count information and remove outdated key phrases periodically; and see Yoo, Col. 4, lines 29-38, Col.*

*47-51: tracking buzz values and determine changes in area of user interest associated with topic, term, or category).*

With respect to claims 22, 31 and 36, the combined teachings of Chandrasekar and Yoo further discloses wherein the information showing popularity of the searched keyword shows popularity ranks of the at least one keyword group associated with the searched representative category (*see Yoo, Col. 15, lines 7-19, Fig 9-13: buzz report with scores information shows the popularity ranks of terms associated with the category*).

With respect to claims 23, 32, and 37, the combined teachings of Chandrasekar and Yoo further discloses wherein the information showing popularity of the searched keyword shows a portion of the at least one keyword group associated with the searched representative category based upon the popularity of the at least one keyword group associated with the searched representative category (*see Yoo, Col. 15, lines 7-19, Fig 9-13: buzz report with scores information shows the popularity ranks of terms associated with the category*).

With respect to claims 24 and 33, the combined teachings of Chandrasekar and Yoo further discloses wherein the information showing popularity of the searched keyword shows changes in the popularity of the searched keyword in association with the other keywords of the at least one keyword group associated with the searched representative category (*see Yoo, Fig 9-13: popularity information shows the changes in the popularity of searched terms*).

***Response to Arguments***

4. Applicant's arguments filed on 8/28/2009, with respect to amended claims 21, 30, 35, cancelled claimed 25-29, 34, 38 have been fully considered, and are moot in view of the new ground(s) of rejection.

The scope of the claimed invention has changed because the claims have amended; thus further consideration and search were conducted, and references Chandrasekar and Yoo are applied to address the claimed features. Because Chandrasekar and Yoo are from the same field of endeavor and both are directed to provide relevant information, it would have been obvious to one skilled in the art at the time of the invention to combine their teachings in order to provide more user interest information.

Therefore, it is believed that all claim limitations have been properly addressed, see the claim analysis above for detail.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELLE OWYANG whose telephone number is (571)270-1254. The examiner can normally be reached on Monday-Friday (Alternate Fridays Off): 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIM VO can be reached on 571-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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